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CLAIMS

1. A caterpillar traction apparatus comprising first and second extensible traction members, the first traction member being driven by and entrained around first and second rotatable members and the second traction member being driven by and entrained around third and fourth rotatable members, each of the rotatable members being addressed by drive means such that the first and third rotatable members can be driven at a first speed and the second and fourth rotatable members can be driven at a second speed, the first speed not being equal to the second speed.
2. A caterpillar traction apparatus according to claim 1, wherein the difference between the first speed and the second speed is between 1% and 10%.
3. A caterpillar traction apparatus according to claim 2, wherein the difference between the first speed and the second speed is 4%.
4. A caterpillar traction apparatus according to any preceding claim, wherein the second speed is less than the first speed.
5. A caterpillar traction apparatus according to any one of claims 1 to 3, wherein the second speed is greater than the first speed.

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6. A caterpillar traction apparatus according to any preceding claim in which the first and second extensible traction members are extended in a direction significantly parallel to their direction of motion.

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7. A caterpillar traction apparatus according to any preceding claim in which the first and second extensible traction members are extended in a direction significantly perpendicular to their direction of motion.

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8. A caterpillar traction apparatus according to any preceding claim wherein the first and second extensible traction members are capable of sustained extensions of 10% or greater.

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9. A caterpillar traction apparatus according to claim 8, wherein the extensible traction members comprise rubber.

20 10. A caterpillar traction apparatus according to claim 8 or claim 9, wherein the extensible traction members comprise a compressible polymer.

25 11. A method of processing a linear member within a mechanical caterpillar apparatus according to any of claims 1 to 10, wherein the processing of the linear member is effected by the difference between the first speed and the second speed.

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12. A method of processing a linear member according to claim 11, wherein the difference between the first speed and the second speed compresses linearly the linear member.

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13. A method of processing a linear member according to claim 11, wherein the difference between the first speed and the second speed extends linearly the linear member.